

ENVIRONMENTAL RADIOLOGICAL PROTECTION PROGRAM (ERPP) PLAN

The ERPP plan is required by Department of Energy (DOE) Order 458.1. Ames Laboratory hereby demonstrates that it has plans, policies and procedures in place to protect the public and the environment against undue risk from radiation associated with DOE radiological activities.

1.0 APPROVAL RECORD

- Reviewed by: Document Control Coordinator (Hiliary Burns)
- Approved by: Radiation Safety Officer (Michael McGuigan)
- Approved by: ESH&A Manager (Sean Whalen)
- Approved by: General Counsel (Barbara Biederman)
- Approved by: Assistant Director for Scientific Planning (Cynthia J. Jenks)
- Approved by: Associate Laboratory Director for Sponsored Research Administration (Debra L. Covey)
- Approved by: Chief Operations Officer (Mark L. Murphy)
- Approved by: Chief Research Officer (Duane D. Johnson)
- Approved by: Deputy Director (Thomas A. Lograsso)
- Approved by: Director (Adam Schwartz)
- Approved by: Ames Site Office Facility Representative (Bruce Goplin)

The official approval record for this document is maintained in the Training & Documents Office, 105 TASf.

2.0 REVISION/REVIEW INFORMATION

The revision description for this document is available from and maintained by the author.

3.0 PURPOSE AND SCOPE

The purpose of this plan is to provide environmental radiological protection and demonstrate compliance with DOE Order 458.1. Definitions can be found by referring to DOE O 458.1 chg. 3, Attachment 2.

4.0 PUBLIC DOSE LIMIT

DOE radiological activities, including remedial actions and activities using Technologically Enhanced Naturally Occurring Radioactive Material (TENORM), must be conducted so that exposure of members of the public to ionizing radiation will not cause a total effective dose (TED) exceeding 100 mrem (1mSv) in a year, an equivalent dose to the lens of the eye exceeding 1500 mrem (15 mSv) in a year, or an equivalent dose to the skin or extremities exceeding 5000 mrem (50 mSv) in a year, from all sources of ionizing radiation due to DOE activities.

5.0 SCOPE OF RADIOLOGICAL ACTIVITIES

Although the amounts of radioactive material commonly used in research at the Laboratory are small (μCi or mCi) and the dose rates are usually less than 10 millirems per hour, radiological conditions are monitored by the Environment, Safety, Health and Assurance (ESH&A) Health Physics Group (HPG). Radiological conditions in the research areas are evaluated through review of survey data, dosimetry records, special radiological monitoring and/or analytical measurements. Ames Laboratory performs a limited number of research activities that use small quantities of radioactive materials, radiation produced by x-ray systems and/or emitted by sealed radioactive material. Three general categories of ionizing radiation sources are used:

- I. Ames Laboratory does not maintain an inventory of nuclear materials such that sufficient quantities of fissile material are present to potentially constitute a critical mass and activities are not present which could be expected to produce emergency exposure situations. Small quantities of source and special nuclear materials (i.e., thorium, uranium, depleted uranium, and low enriched uranium) are utilized by a very limited number of research activities. The source materials and special nuclear materials are maintained in individual materials balance areas and reported to DOE. The Laboratory is considered a category IV facility for purposes of the Materials Control and Accountability program. Research involving the use of these materials includes projects for purifying isotopes for use at other research facilities and the nebulization of materials and the study of laser-ablated materials. Periodic requests are received from other facilities for small quantities of purified material (e.g., crystal bar thorium), which are sent as limited quantity shipments.
- II. Sealed and unsealed radioactive materials are used as check sources and calibration sources or are specifically ordered for use in short-term research projects. Some research may involve the use of small, low activity neutron-activated metal sources.
- III. Radiation generating devices (RGD) are utilized by several research groups. Sealed sources are used for gamma radiation capture for research sample analysis.

Areas of low-level legacy contamination exist in some buildings of the Laboratory as a result of DOE legacy research and production activities. These areas are not routinely accessed by employees and are posted. Work in contaminated areas is performed under authority of established radiological work permits and HPG oversight. New activities or modifications to approved activities involving the use of any source of ionizing radiation must be approved through [Ames Laboratory Readiness Review](#) before beginning operations.

6.0 AS LOW AS REASONABLY ACHIEVABLE (ALARA)

ALARA is Ames Laboratory's approach to radiological protection, used to manage and control exposures (individual and collective) to employees, visitors, and the general public. ALARA is not a dose limit, but is a philosophy for devising processes, procedures and operations so as to maintain doses within applicable limits and as far below them as can be reasonably achieved. Ames Laboratory's policies and procedures are consistent with the ALARA philosophy.

It is the policy of Ames Laboratory to conduct its activities in such a manner that worker and public safety, as well as protection of the environment, is given high priority. Ames Laboratory management is committed to maintaining ionizing radiation risks to levels that are ALARA and to minimizing associated environmental, safety and health impacts in all Laboratory activities. Both individual and collective exposures to laboratory workers, visitors, or members of the public, are maintained within appropriate regulatory limits and as far below such limits as social, technical, economic, practical, and public policy considerations permit.

7.0 COMPLIANCE STATEMENTS

DOE Order 458.1 Contractor Requirements Document (CRD) Attachment 1, Radiation Protection of the Public and the Environment

A. DOE O 458.1	B. Description	C. Applicable Documents
General Requirements		
DOE O 458.1§ CRD 1.a	The contractor must establish and implement a program to protect the public and the environment against undue risk from radiation associated with DOE radiological activities through application of the Specific Requirements (paragraph 2) in this CRD.	The <i>Environmental Radiological Protection Plan (ERPP)</i> (Plan 10200.041) provides specific information related to environmental and public protection. The <i>Radiation Protection Program (RPP)</i> (Plan 10202.004) provides additional information regarding the use of radiological materials and radiation producing devices at the Ames Laboratory.
DOE O 458.1§ CRD 1.b	The contractor must provide a schedule for full implementation of the Specific Requirements in this CRD as directed by DOE.	The Specific Requirements in this CRD are outlined in this document, <i>ERPP</i> (Plan 10200.041).
DOE O 458.1§ CRD 1.c	The contractor must develop documentation that demonstrates how the Specific Requirements in this CRD are implemented.	<i>ERPP</i> (Plan 10200.041) demonstrates compliance with the Specific Requirements in this CRD.
DOE O 458.1§ CRD 1.d	The contractor must obtain DOE line management approval of the documentation demonstrating compliance with the Specific Requirements in this CRD.	DOE line management approval will be obtained from DOE, Ames Site Office.
Specific Requirements		
DOE O 458.1§ CRD 2.a., 2.a.(1) - (2)	<u>Environmental Radiological Protection Program</u> . The contractor conducting radiological activities must develop and implement a documented program which addresses compliance with the Specific Requirements in this CRD that are relevant to the particular activities being conducted.	The <i>ERPP</i> (Plan 10200.041) and the <i>RPP</i> (Plan 10202.004) serve as roadmaps to specific documents that ensure radiological protection of the environment, the public, and workers.

A. DOE O 458.1	B. Description	C. Applicable Documents
DOE O 458.1§ CRD 2.b., 2.b.(1)	<u>Public Dose Limit.</u> DOE radiological activities, including remedial actions and activities using TENORM, must be conducted so that exposure of members of the public to ionizing radiation will: (see below – 2.b. (1)(a))	<p>There are no TENORM radiological activities that impact the environment or expose members of the public to radiation from Ames Laboratory activities. The following processes provide assurance that potential new radiological activities will not impact the environment or expose members of the public.</p> <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan 10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.
DOE O 458.1§ CRD 2.b.(1)(a)	<p>Not cause a total effective dose (TED) exceeding 100 mrem (1mSv) in a year, an equivalent dose to the lens of the eye exceeding 1500 mrem (15 mSv) in a year, or an equivalent dose to the skin or extremities exceeding 5000 mrem (50 mSv) in a year, from all sources of ionizing radiation and exposure pathways that could contribute significantly to the total dose excepting:</p> <ol style="list-style-type: none"> <u>1</u> Dose from radon and its decay products in air [Radon is addressed separately e.g., under paragraphs 2.f. and 2.h. of the Specific Requirements in this CRD and under Title 40 Code of Federal Regulations (CFR) Part 61, Subparts Q and T]; <u>2</u> Dose received by patients from medical sources of radiation, and by volunteers in medical research programs; <u>3</u> Dose from background radiation; and <u>4</u> Dose from occupational exposure under Nuclear Regulatory Commission (NRC) or Agreement State license or to general employees regulated under 10 CFR Part 835, and (see below -2.b.(1)(b)) 	Radiological worker exposures do not meet or exceed these limits, and therefore members of the public are not exposed to any increased radiological hazards due to DOE activities. The Ames Laboratory <i>RPP</i> (Plan 10202.004) describes the Laboratory's program for dosimetry.
DOE O 458.1§ CRD 2.b.(1)(b)	Comply with As Low As Reasonably Achievable (ALARA) requirements in paragraph 2.d. of the Specific Requirements in this CRD.	The Ames Laboratory <i>RPP</i> (Plan 10202.004) describes the Laboratory's ALARA processes, in fulfillment of the principles as defined in ALARA Policy (Policy 10202.001).

A. DOE O 458.1	B. Description	C. Applicable Documents
DOE O 458.1§ CRD 2.b.(2)	The public dose limit applies to members of the public located off DOE sites and on DOE sites outside of controlled areas, and to those exposed to residual radioactive material subsequent to any remedial action or clearance of property.	<p>There are no radiological activities that impact the environment or expose members of the public to radiation from Ames Laboratory activities. The following processes provide assurance that potential new radiological activities will not impact the environment or expose members of the public.</p> <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan 10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.
DOE O 458.1§ CRD 2.c	Temporary Dose Limits. If special circumstances could affect a DOE radiological activity in such a manner that the potential dose to a member of the public could exceed a TED of 100 mrem (1 mSv) in a year the contractor must submit a request for specific authorization for a temporary public dose limit higher than 100 mrem (1 mSv) in a year to the responsible Field Element Manager. This request must include documentation that justifies the need for the increase, the alternatives considered, and the application of the ALARA process. The specific exposure pathways excepted in paragraphs 2.b.(1)(a) 1-4 of the Specific Requirements in this CRD are also excepted for temporary dose limits.	<p>Ames Laboratory does not maintain an inventory of nuclear materials such that sufficient quantities of fissile material are present to potentially constitute a critical mass and activities are not present which could be expected to produce emergency exposure situations. Should the inventory of special nuclear materials be increased to potentially constitute a critical mass, Ames Laboratory will review and revise its RPP accordingly.</p> <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan 10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA.
DOE O 458.1§ CRD 2.d., 2d(1) – (2)	<u>As Low As Reasonably Achievable (ALARA).</u>,	<p>There are no radiological activities that impact the environment or expose members of the public to radiation from Ames Laboratory activities. The following processes provide assurance that potential new radiological activities will not impact the environment or expose members of the public.</p> <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan 10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.

A. DOE O 458.1	B. Description	C. Applicable Documents
DOE O 458.1§ CRD 2.e., 2.e.(1) – (7)	<u>Demonstrating Compliance with the Public Dose Limit.</u> The Contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements: ...,	There are no radiological activities that impact the environment or expose members of the public to radiation from Ames Laboratory activities. The following processes provide assurance that potential new radiological activities will not impact the environment or expose members of the public. <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan 10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.
DOE O 458.1§ CRD 2.e.(8)	Doses to members of the public from airborne effluents must be evaluated with the CAP-88 model or other EPA-approved model or method to demonstrate compliance with applicable subparts of 40 CFR Part 61, <i>National Emission Standards for Hazardous Air Pollutants</i> .	Ames Laboratory does not use CAP-88. 40 CFR Part 61 allows the use of 40 CFR Part 61.94 and reference Table 1 of 40 CFR Part 61 Appendix E, "Possession Quantities for Radionuclides" as a way to document that the Laboratory is in compliance with the regulation. Utilizing Table 1 quantities is allowable by Memorandum of Understanding between the EPA and DOE.
DOE O 458.1§ CRD 2.e.(9) - (10)	(9) Environmental monitoring must be conducted to characterize routine and non-routine releases of radioactive material from radiological activities... (10) Site-specific environmental monitoring criteria must be established...	There are no radiological activities that impact the environment or expose members of the public to radiation from Ames Laboratory activities. The following processes provide assurance that potential new radiological activities will not impact the environment or expose members of the public. <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan 10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.

A. DOE O 458.1	B. Description	C. Applicable Documents
DOE O 458.1§ CRD 2.f., 2.f.(1)	<p>Airborne Radioactive Effluents. The contractor must establish and implement procedures and practices related to airborne radioactive effluents so that radiological activities are conducted in a manner such that the release of radioactive material to the atmosphere will:</p> <p>(1) Be evaluated using the ALARA process established in paragraph 2.d. of the Specific Requirements in this CRD;</p>	<p>There are no radiological activities that impact the environment or expose members of the public to radiation from Ames Laboratory activities. The following processes provide assurance that potential new radiological activities will not impact the environment or expose members of the public.</p> <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan 10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.
DOE O 458.1§ CRD 2.f.(2)	<p>(2) Not cause radon-222 flux rates to exceed 20 pCi (0.7 Bq)/m2-sec averaged over the surface area overlaying waste, including the covering or other confinement structures, wherever radium-226 wastes are accepted for storage or disposal (See 40 CFR Part 61, Subparts Q and T);</p>	<p>40 CFR Part 61 Subpart Q applies to storage and disposal facilities. The Laboratory's low-level waste is stored in controlled areas that are not accessible to the public.</p> <p>40 CFR Part 61 Subpart T applies to the disposal of uranium tailings and is not applicable to Ames Laboratory.</p>
DOE O 458.1§ CRD 2.f.(3)	<p>(3) Meet compliance agreements under 40 CFR Part 61, Subparts H, Q, and T;</p>	<p>The following processes provide assurance that potential new radiological activities will meet the requirements of 40 CFR Part 61, Subparts H, and Q.</p> <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan 10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles. <p>40 CFR Part 61 Subpart T applies to the disposal of uranium tailings and is not applicable to Ames Laboratory.</p>
DOE O 458.1§ CRD 2.f.(4)	<p>(4) Not cause the radon-220 and radon-222 decay product concentration, including background, to exceed 0.03 WL in buildings that are being released from DOE control. Further, a reasonable effort must be made to meet a 0.02WL generic guideline for annual average radon-220 and radon-222 decay product concentration, including background, in such buildings; and</p>	<p>There are known elevated radon levels in Controlled Areas, but members of the public do not have access to these Controlled Areas.</p>

A. DOE O 458.1	B. Description	C. Applicable Documents
DOE O 458.1§ CRD 2.f.(5)	(5) Not exceed 3 pCi/L annual average radon-220 and radon-222 concentration, not including background, at the site boundary if DOE activities release radon-220 and radon-222 or their decay products.	There are known elevated radon levels in Controlled Areas, but members of the public do not have access to Controlled Areas.
DOE O 458.1§ CRD 2.g.(1) – (11)	Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must: (1) – (11).	Existing policies, plans and procedures are in place to ensure impacts are prevented. <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan 10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.
DOE O 458.1§ CRD 2.h., 2.h.(1)	<u>Radioactive Waste and Spent Nuclear Fuel.</u> The contractor must establish and implement procedures and practices to ensure that management, storage and disposal of radioactive waste and spent nuclear fuel on DOE sites address the following elements: (1) Radiological activities must be conducted in a manner such that radiation exposure to members of the public from management and storage of radioactive waste complies with ALARA process requirements and does not result in a TED greater than 25 mrem (0.25 mSv) in a year from all exposure pathways and radiation sources associated with the waste, except for transportation and radon and its decay products.	Existing policies, plans and procedures are in place to ensure impacts are prevented. <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan 10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.
DOE O 458.1§ CRD 2.h.(2)	(2) Management of spent nuclear fuel, and high-level and transuranic wastes at a disposal facility which is not regulated by the NRC must comply with the requirements of this CRD and 40 CFR Part 191, <i>Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-level and Transuranic Radioactive Wastes.</i>	Neither spent nuclear fuel nor high-level transuranic waste is generated or disposed of at the Laboratory.

A. DOE O 458.1	B. Description	C. Applicable Documents
DOE O 458.1§ CRD 2.h.(3)	(3) Management, storage and disposal of low-level radioactive waste must be conducted in a manner such that exposure to members of the public to radiation from radioactive waste complies with ALARA process requirements, and does not exceed a TED of 25 mrem (0.25 mSv) in a year from all exposure pathways and radiation sources associated with the waste, except for transportation and radon and its decay products.	Radioactive waste is stored in Controlled Areas, but members of the public do not have access to Controlled Areas. The Laboratory's <i>Radioactive Waste Management Basis</i> (Plan 10200.033) describes radioactive waste management, storage and disposal. ALARA (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.
DOE O 458.1§ CRD 2.h.(4)	(4) Management, storage and disposal of 11e.(2) byproduct material, as defined in Section 11e.(2) of the AEA and other wastes containing uranium and thorium and their decay products which are not subject to the requirements of 40 CFR Part 192, <i>Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings</i> , are not at facilities licensed by the NRC, or are not disposed of at DOE low-level waste disposal facilities, must be in accordance with the requirements of paragraph 2.h. of the Specific Requirements in this CRD and DOE-approved plans. (a) – (d) ...,	Radioactive waste is stored in Controlled Areas, but members of the public do not have access to Controlled Areas. The Laboratory's <i>Radioactive Waste Management Basis</i> (Plan 10200.033) describes radioactive waste management, storage and disposal. ALARA (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles. Disposal facilities' requirements are not applicable. Ames Laboratory does not have long term storage and disposal capabilities.
DOE O 458.1§ CRD 2.h.(5)	Discrete sources of radium-226, accelerator produced radioactive material, or naturally-occurring radioactive material (NORM) that pose a threat similar to discrete sources of radium-226, which are defined as Section 11e.(3) or 11e.(4) byproduct material in the AEA, must be managed as high-level waste, low-level waste or 11e.(2) material as appropriate under DOE AEA authorities and in compliance with the Specific Requirements in this CRD and the requirements in the CRD to DOE O 435.1 Chg 1.	Radioactive waste is stored in Controlled Areas, but members of the public do not have access to Controlled Areas. The Laboratory's <i>Radioactive Waste Management Basis</i> (Plan 10200.033) describes radioactive waste management, storage and disposal. ALARA (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.

A. DOE O 458.1	B. Description	C. Applicable Documents
DOE O 458.1§ CRD 2.i., 2.i. (1) & (2)	<u>Protection of Drinking Water and Ground Water.</u> (1) – (2) ...	<p>There are no radiological activities that impact the environment or expose members of the public to radiation from Ames Laboratory activities. The following processes provide assurance that potential new radiological activities will not impact the environment or expose members of the public.</p> <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.
DOE O 458.1§ CRD 2.j., 2.j.(1) - (2)	<u>Protection of the Biota.</u> The contractor must establish and implement procedures and practices to ensure that biota are protected and to address the following elements: (1) – (2) ...	<p>There are no radiological activities that impact the environment or expose members of the public to radiation from Ames Laboratory activities. The following processes provide assurance that potential new radiological activities will not impact the environment or expose members of the public.</p> <ul style="list-style-type: none"> • <i>NEPA Plan</i> (Plan10200.025) identifies new projects during planning stage. • <i>Readiness Review</i> (Procedure 10200.010) ensures that appropriate work controls are applied. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles.
DOE O 458.1§ CRD 2.k., 2.k.(1) – (6)	<u>Release and Clearance of Property.</u> The contractor must establish and implement procedures and practices to ensure that release or clearance of property with the potential to contain residual radioactive material must be conducted in accordance with DOE direction and in accordance with the requirements in paragraph 2.k. of the Specific Requirements in this CRD ¹ . (1) – (2) Dose Constraints ... (a) Real Property - a TED of 25 mrem (0.25 mSv) above background in any calendar year; (b) Personal property - a TED of 1 mrem (0.01 mSv) above background in any calendar year. (3) – (6) ...	<p>Current policies and procedures are in place to monitor the release of property.</p> <ul style="list-style-type: none"> • <i>Hazard Identification for Excess Property and Materials</i> (Procedure 10200.054) ensures that excess property and materials are properly evaluated before being shipped off-site for reuse or scrap. • <i>Survey of Equipment/Material for Transfer to the Ames Laboratory Warehouse</i> (Procedure 10202.054) provides step-by-step instructions for surveying and clearing equipment and/or material for transfer to the Ames Laboratory Warehouse for storage. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • <i>ALARA</i> (Policy 10202.001) establishes the Laboratory's commitment to ALARA principles. <p>Authorized limits in Figure IV-1 of DOE Order 5400.5² are utilized as thresholds for release of items.</p>

A. DOE O 458.1	B. Description	C. Applicable Documents
DOE O 458.1§ CRD 2.k.(7)	Clearance of Environmental Restoration, decommissioning and Other Cleanup Materials. (a) – (c) ...	The Laboratory does not have any environmental restoration or decommissioning activities. In the event of such an activity, the <i>NEPA Plan</i> (Plan 10200.025) and the <i>Readiness Review Procedure</i> (Procedure 10200.010) would be applied and would involve consultation with Iowa Department of Public Health, Iowa Department of Natural Resources, ISU-EHS (Contract oversight) and the DOE Ames Site Office.
DOE O 458.1§ CRD 2.k.(8)	Radiological Monitoring or Surveys. (a) – (b) ...	<p>Current policies and procedures are in place to monitor the release of property.</p> <ul style="list-style-type: none"> • <i>Hazard Identification for Excess Property and Materials</i> (Procedure 10200.054) ensures that excess property and materials are properly evaluated before being shipped off-site for reuse or scrap. • <i>Survey of Equipment/Material for Transfer to the Ames Laboratory Warehouse</i> (Procedure 10202.054) provides step-by-step instructions for surveying and clearing equipment and/or material for transfer to the Ames Laboratory Warehouse for storage. • <i>Calibration of Portable Survey Instruments</i> (Procedure 10202.011) describes the requirements for calibration of portable radiation survey instruments and requires the inspection and maintenance of instruments and the use of NIST traceable standards for annual calibration. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work.
DOE O 458.1§ CRD 2.k.(9)	Documentation and Verification. ...	<p>Current policies and procedures are in place to monitor the release of property.</p> <ul style="list-style-type: none"> • <i>Hazard Identification for Excess Property and Materials</i> (Procedure 10200.054) ensures that excess property and materials are properly evaluated before being shipped off-site for reuse or scrap. • <i>Survey of Equipment/Material for Transfer to the Ames Laboratory Warehouse</i> (Procedure 10202.054) provides step-by-step instructions for surveying and clearing equipment and/or material for transfer to the Ames Laboratory Warehouse for storage. • <i>Calibration of Portable Survey Instruments</i> (Procedure 10202.011) describes the requirements for calibration of portable radiation survey instruments and requires the inspection and maintenance of instruments and the use of NIST traceable standards for annual calibration. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work.

Contact Person [Sarah Morris-Benavides](#)
Document Plan 10200.041

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A. DOE O 458.1	B. Description	C. Applicable Documents
DOE O 458.1§ CRD 2.k.(10)	Public Notification of Clearance of Property. ...	Public notification via the Site Environmental Report . Property containing trace amounts of radioactivity above limits in Figure IV-1 of DOE Order 5400.5 ² are not released.
DOE O 458.1§ CRD 2.k.(11)	Final Clearance Documentation. ...	<p>Current policies and procedures are in place to monitor the release of property.</p> <ul style="list-style-type: none"> • Site Environmental Reports • <i>Hazard Identification for Excess Property and Materials</i> (Procedure 10200.054) ensures that excess property and materials are properly evaluated before being shipped off-site for reuse or scrap. • <i>Survey of Equipment/Material for Transfer to the Ames Laboratory Warehouse</i> (Procedure 10202.054) provides step-by-step instructions for surveying and clearing equipment and/or material for transfer to the Ames Laboratory Warehouse for storage. • <i>Calibration of Portable Survey Instruments</i> (Procedure 10202.011) describes the requirements for calibration of portable radiation survey instruments and requires the inspection and maintenance of instruments and the use of NIST traceable standards for annual calibration. • <i>Waste Management Basis Plan</i> (Plan 10200.033) describes the basis for the Laboratory's radioactive waste management program.

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A. DOE O 458.1	B. Description	C. Applicable Documents
DOE O 458.1§ CRD 2.I, 2.I.(1) – (6)	<u>Records, Retention and Reporting Requirements.</u> The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addresses: (1) – (6) ...	<p>Current policies and procedures are in place to monitor the release of property.</p> <ul style="list-style-type: none"> • Site Environmental Reports summarize the environmental status of Ames Laboratory and includes descriptions of the Laboratory site, its mission, the status of its compliance with applicable environmental regulations, its planning and activities to maintain compliance, and a comprehensive review of its environmental protection, surveillance and monitoring activities. • <i>RPP</i> (Plan 10202.004) provides requirements for radiological work. • Vital Records (Plan 48202.001) provides a framework for the identification, protection and retrieval of vital records. • <i>Calibration of Portable Survey Instruments</i> (Procedure 10202.011) describes the requirements for calibration of portable radiation survey instruments and requires the inspection and maintenance of instruments and the use of NIST traceable standards for annual calibration. • <i>Radioactive Waste Management Basis Plan</i> (Plan 10200.033) describes the basis for the Laboratory's radioactive waste management program.

¹ In addition to paragraph 2.k of the Specific Requirements in this CRD, the following may have applicable requirements regarding clearance of property: 41 CFR Chapter 109, *Department of Energy Property Management Regulations*; DOE O 430.1B Chg 2, *Real Property Asset Management*; DOE O 580.1A, *Department of Energy Personal Property Management Program*.

² DOE O 458.1 and DOE O 458.1, Admin Chg. 3, Radiation Protection of the Public and the Environment, issued January 15, 2013, cancelled DOE 5400.5 in its entirety. However, paragraph (f) 1b on Page 19 of DOE O 458.1(1-15-2013) states "Previously approved guidelines and limits (such as the surface activity guidelines) may continue to be applied and used as Pre-Approved Authorized Limits until they are replaced or revised by Pre-Approved Authorized Limits issued by the Department."